

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings of claims in the application.

Listing of the Claims:

1. (currently amended) A shaft sealing system for use in a seal cavity of a rotary mechanical device having an output end and a motor end, the device being driven by a rotating shaft coupled to a motor, comprising

a substantially rigid cylindrical ~~bearing~~ body dimensioned to fit into the seal cavity and having an outer surface closely dimensioned to fit into the seal cavity with an inner bore closely dimensioned along the full length of the ~~bearing cylindrical body~~ to fit over the shaft at one end of the seal cavity to provide a bearing surface for the ~~[shaft.]~~ shaft;

the cylindrical body having a cylindrical outer wall formed with a groove and an internal groove in the inner bore at the location of the outer groove to form an integral lantern ring with at least one hole connecting the inner groove and outer groove for passage of seal fluid.

2. (original) The shaft sealing system of claim 1, wherein the body is formed of a non-ferrous metal material.

3. (previously presented) The shaft sealing system of claim 1, wherein the body is formed from a filled thermoplastic material.

4. (currently amended) The shaft sealing system of claim [10] 1, wherein the width of the outer groove is narrower than the length of cylindrical outer wall of the cylindrical body.

5. (original) The shaft sealing system of claim 1, wherein the cylindrical body is split along a center-line.

6. (original) The shaft sealing system of claim 5, wherein corresponding alignment holes are formed in each side of the split seal and alignment pins are positioned in the alignment holes.

7. (original) The shaft sealing system of claim 1, wherein the outer surface of the cylindrical body includes a groove with an O-ring disposed therein.

8. (previously presented) The shaft sealing system of claim 1, further including at least one packing ring disposed on the motor side of the rigid cylindrical body in the seal cavity.

9. (original) The shaft sealing system of claim 1, wherein the rotary device is a rotary pump.

10. (canceled)

11. (currently amended) The shaft sealing system of claim ~~[10]~~ 1, wherein the seal fluid is water.

12. (previously presented) The shaft sealing system of claim 1, wherein the cylindrical body is positioned at the output end of the seal cavity.

13. (previously presented) The shaft sealing system of claim 3, wherein the thermoplastic material is filled with at least one of molybdenum, carbon and glass.

14. (previously presented) The shaft sealing system of claim 8, wherein the at least one packing ring is a compressible packing ring.

15. (previously presented) A method for providing a bearing surface for a rotary mechanical device having a seal cavity with an output end and motor end, comprising:

providing a substantially rigid cylindrical body dimensioned to fit into the seal cavity and having an outer surface closely dimensioned to fit into the seal cavity and an inner bore closely dimensioned along the full length of the body to fit over the shaft at one end of the seal cavity;

inserting the substantially rigid cylindrical body about the shaft; and

sealing the motor end of the seal cavity.

16. (previously presented) The method of providing a bearing surface of claim 15, including the step of splitting a substantially rigid cylindrical body and positioning the about the shaft at the impeller end of the seal cavity.

17. (previously amended) The method of providing a bearing surface of claim 16, further including the step of inserting at least one compressible sealing ring at the motor end of the substantially rigid cylindrical body.

18. (new) The shaft sealing system of claim 1, wherein the groove on the outer wall is formed at the motor end of the cylindrical body.